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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/128,394	08/03/1998	CURT D. TUDOR	RATLP007	2723

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EXAMINER
ZHEN, LI B

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/128,394	Applicant(s) TUDOR, CURT D.	
	Examiner Li B. Zhen	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *8 July 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 6 and 8 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows U.S. Patent No. 6,009,269.

As to claim 1, Burrows teaches (column 3, lines 43 – 53; column 6, lines 30 – 40) determining unsynchronized access (concurrency error), receiving a request from a first thread to access the resource that is available (a thread makes a call 221 to acquire an associated lock). As to the limitation "suspending the first thread", the limitation does not specify when and under what condition to suspend the first thread. Under a broad interpretation, the first thread can make a second call to request access to a second resource that is not available, which would suspend the first thread (see the dead-lock example in column 3, lines 58 – 62). Burrows does not teach a second thread requesting access to the same resource. However, multiple threads can obviously request access to the same resource at the same time because threads operate independently of each other.

As to claim 2, Burrows teaches (column 7, lines 10 – 15) write access.

As to claim 3, it is obvious that the first thread would eventually wake up.

As to claim 4, Burrows teaches (column 3, lines 10 – 17) logging (record 195, Fig. 1) unsynchronized accesses.

As to claim 5, the first thread is suspended for a predetermined time (time thread waits for the requested resource to become available).

Referring to claim 6 as best understood, the event (requested resource becomes available) would awaken the first thread.

As to claim 8, Burrows teaches (column 2, lines 20 – 29) the use of memory.

As to claim 9, this is a product claim that corresponds to method claim 1; note the rejection of claim 1 above, which also meets the product claim.

As to claim 10, all of the listed storage mediums are well-known choices to store a computer program.

As to claim 11, 12 – 16, these are the same as claims 1 – 2, 3 – 7 except the resource is recited as a memory location; note the rejection of claims 1 – 7 above, which also meets this claims.

As to claim 17, this is the same as claim 9 except the resource is recited as a memory location; note the rejection of claim 9 above, which also meets this claim.

As to claim 18, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

As to claim 19, 20 – 22, these are the same as claims 11 – 13, 14 – 16; note the rejection of claims 11 – 16 above, which also meets these claims.

As to claim 23, this is a product claim that corresponds to method claim 19; note the rejection of claim 19 above, which also meets this claim.

As to claim 24, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

As to claim 25 - 28, this is the same as claims 19 – 22 with the addition of modifying existing program to include computer code. Burrows teaches (column 2, lines 42 – 67) modifying existing program to include computer code.

As to claim 29, this is a product claim that corresponds to method claim 25; note the rejection of claim 25 above, which also meets the product claim.

As to claim 30, this is the same as claim 10; note the rejection of claim 10 above, which also meets this claim.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows as applied to claim 6 further in view of Farrell U.S. Patent No. 5,630,128.

As to claim 7, Burrows does not teach a second thread that sends the event that awakens the first thread.

Farrell teaches (column 7, lines 27 – 35) a first thread (waiting thread), a second thread (data generating thread), an event (Unblock function call).

It would have been obvious to apply the use of a second thread to awaken the first thread as taught by Farrell to the invention of Burrows because it would notify the first thread that another thread has requested access to the same resource.

Response to Arguments

4. The applicant submits, (p. 7, lines 22 – 25) "the first thread is suspended after it requests access to a resource that is available" and is contrary to conventional techniques "as threads are granted access to the resource if it available." The examiner

disagrees because the scope of the independent claims is very broad; therefore, the claims can be interpreted in many ways. According to the ordering of the limitations, it could be deduced that the first thread is suspended after it requests access to a resource that is available. However, the independent claims do not specify how long after the request and under what condition the first thread is suspended, which allows a broad interpretation of the independent claims. For example, consider the situation when a first thread request access to a first resource that is available and is granted access to the resource. After gaining access to the first resource, the first thread continues processing and requires access to a second resource that is not available. Therefore, the first thread would be suspended while it is waiting for the second resource. In this situation, a first thread requests access to a resource that is available and the first thread is suspended, which would meet the claimed limitations of the applicant's independent claims. Since the independent claims are so broad, a common situation where a thread suspends to wait for a resource to become available as described above would meet the independent claims.

The applicant argues (p. 7, lines 25 – 28) that "the invention as recited in claim 1, a second thread can request access to the resource thereby potentially causing a race condition" and "Burrows does not disclose or suggest these features". The examiner disagrees because claim 1 is very broad; therefore, the invention of Burrows would read on claim 1 (see the rejection above). As to the applicant's argument regarding "...potentially causing a race condition," this limitation is not brought out by claim 1.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8am - 4:30pm.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Li B. Zhen
Examiner
Art Unit 2151

lbz
September 19, 2002

ST. JOHN COURTENAY III
PRIMARY EXAMINER